

## REMARKS

This is in response to the office action dated March 2, 2004. Applicants wish to thank the Examiner for the careful review of the application. Applicants note the statements in paragraph 1 of the office action to which no response is required.

Applicants note the claim objections in paragraph 2 of the office action and appropriate correction has been made to claims 9 and 35.

Claims 9 and 35 have been amended. Claim 9 has been amended so as to delete the word "includes". Claim 35 has been amended to delete the comma after the word "and."

**In paragraph 4 of the final office action, claim 3 was rejected under 35 U.S.C. 102(b) as being anticipated by Voss (US 3859408).**

Applicants respectfully request reconsideration of claim 3. The undersigned understands what the Examiner is explaining where it is stated that energy source 20 does not contact the hose 10, but it is respectfully stated that such statement is illogical. Using the Examiner's implied definition of non-contact energy source, there would never be a contact energy source since by definition it could always be argued that the energy comes from some place else. For instance, an energized bare electrical wire could be described as a non-contact energy source because the steam to turn the turbine-generator is miles away and does not contact whatever contacts the electrical wire. Similarly, it is believed that the Examiner's assertion that means 20 do not constitute a contact energy source is

believed to be incorrect.

Claim 3 has been amended to clarify the nature of the energy source as a non-contact heater. Claims 9 and 33 have been similarly amended.

The three modes of heat transfer are conduction, convection and radiation.

5 Conduction occurs through contact. Voss conducts heat to the hose for curing. Non contact energy sources do not conduct heat or do not effect heat transfer by conduction.

Further, the '408 patent to Voss indicates that heat source 28 is another contact energy source.

10 Voss teaches a tubular device set forth in the drawings having a sleeve portion 16 and a concavity portion 18. Sleeve portion 16 provides cooling in the case of thermal setting plastics. Col. 1, lines 61-65. Concavity portion 18 provides direct contact heating of a tubular article. It is respectfully suggested that the Patent Examiner's reasoning is incorrect for at least two reasons.

15 First, although the heating means 20 of Voss are not directly in contact with the tubular article, the unnumbered body of the concavity directly contacts and directly transmits heat to the tubular article. Therefore, Voss teaches a direct contact heater or put another way Voss teaches a contact energy source. Second, floating plug 24 is not a floating mandrel, its just a plug.

20 **In paragraph 6 of the final office action claims 3 and 11-12 were rejected under 35 U.S.C. 103 (a) as being unpatentable over Merck in view of Dougherty.**

Reconsideration of claims 3 and 11-12 is requested.

There is no suggestion in either of the references to combine them.

Indeed, curing tubes 33 and 115 contact the hose directly and are contact heaters.

As understood they are part of larger devices such as jacket 37 in the case of curing tube 33. The Examiner asserts in the after final office action that heated oil circulates outside  
5 tubes 33/115 and therefore the heated oil is not in contact with the energy source. Again, as in the case of Voss, this definition of non-contact energy source is contorted and is not within the meaning of the claims. Tubes 33/115 are contact heaters.

The Patent Examiner then suggests in the rejection that a person skilled in the art would recognize that air as taught by Dougherty could be used as an alternative to the  
10 fluid of Merck. However, this ignores the structure of Merck totally. The weight of the liquid filled hose, for example, the “fluid mandrel” must be supported or the hose will bend and sag. Heated tube 115 supports the “fluid mandrel” and without it (i.e, a microwave heater) a sag would occur. The Patent Examiner is suggesting that a person skilled in the art, based on the teachings of the references, would use air to replace the  
15 fluid within the hose of Merck and would also use microwave heaters instead of the fluid filled jackets of Merck. However, the Patent Examiner does not identify the suggestion or motivation in either reference to combine them.

Therefore, it is respectfully suggested that Merck is a contact heater and that it is designed to be a contact heater and must be a contact heater and that one skilled in the art  
20 would not look to combine it with a microwave heater. As such, claims 3 and 11 are patentable as well as claim 12 which is dependent on allowable claim 11.

**In paragraph 7 of the final office action, claims 9 and 33-35 were rejected under 35 U.S.C. 103(a) as being unpatentable over Merck in view of Dougherty, Hopkins, and the collective teachings of Gattrugeri and Kunz.**

5 Reconsideration of claims 9 and 33-35 is respectfully requested.

First there is no suggestion in any of the references to combine them.

Second, for the reasons stated above, Merck in view of Dougherty does not teach air supplied to the interior of the hose. Nor does Merck in view of Dougherty teach vulcanizing the hose from the outside to the inside using a non-contact energy source.

10 Merck uses a contact energy source namely tubes 33 and 115.

Hopkins, Gattrugeri and Kunz do nothing more than illustrate that valves and check valves are known. It is respectfully suggested that bits and pieces of these references are being improperly used to attempt to arrive at the claimed invention.

15 **In paragraph 8 of the final office action, claim 36 was rejected under 35 U.S.C. 103(a) as being unpatentable over Merck, Dougherty, Hopkins, Gattrugeri, and Kunz et al. as applied to claim 33 above, and further in view of Satzler.**

Claim 36 depends from allowable claim 33 and as such it is patentable. There is no suggestion or motivation to combine the teachings of any of the six patents cited in this rejection. Further, the specification of the instant invention at pages 5 and 6 describes the control of the diameter of the hose. The check valve of the instant invention does not control the diameter of the hose rather it controls the direction of air flow .

Reconsideration of claim 36 is requested.

25 **In paragraph 9 of the office action, claim 17 was rejected under 35 U.S. 103(a) as being unpatentable over Tanaka in view of Merck and Dougherty.**

Reconsideration of claim 17 is requested because of (at least) the deficiencies of Merck identified above. Merck is a contact heater. Claim 17 requires a non contact heater. There is no suggestion to combine the references.

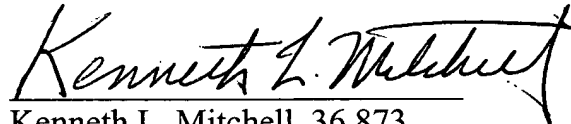
A one month petition for an extension of time and fee therefore is submitted  
5 herewith.

An information disclosure statement is being submitted herewith.

Applicants note the allowance of claims 25-30 as well as the determination of allowable subject matter in claims 13 and 18-20.

Please contact the undersigned by phone if any matter in this application can be  
10 expedited or if there are any questions.

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